

NOVEL ANTI-ARRHYTHMIC AND HEART FAILURE DRUGS THAT TARGET THE  
LEAK IN THE RYANODINE RECEPTOR (RYR2) AND USES THEREOF

ABSTRACT OF THE DISCLOSURE

[00218] The present invention provides methods for limiting or preventing a decrease  
5 in the level of RyR2-bound FKBP12.6 in a subject. The present invention further provides  
methods for treating and preventing atrial and ventricular cardiac arrhythmias, heart failure,  
and exercise-induced sudden cardiac death in a subject. Additionally, the present invention  
provides use of JTV-519 in a method for limiting or preventing a decrease in the level of  
RyR2-bound FKBP12.6 in a subject who has, or is a candidate for, atrial fibrillation. Also  
10 provided are uses of 1,4-benzothiazepine derivatives in methods for treating and preventing  
atrial and ventricular cardiac arrhythmias and heart failure in a subject, and for preventing  
exercise-induced sudden cardiac death. The present invention also provides methods for  
identifying agents for use in treating and preventing atrial fibrillation and heart failure, and  
agents identified by these methods.

15